INDEX.

PAGE

Academy, The Royal, Exhibition 128

Acids in Soil—
Letter on; by W. A. Smith 16

Alps, The Buried—
By Grenville A. J. Cole 41

Anderson, Wm.—
Letters on Is the Stellar Universe Finite? 14, 36

Antoniadi, Eugene, F.R.A.S.—
The Photography of Clouds 79, 107
The Great Telescope of Paris, 1900 246

Astbury, T. H.—
Letter on A Cloud of Dried Beech Leaves ... 109

Astrology—
Letters on; by B. Chatley 205, 227
Letters on; by Alan Leo 228, 255

Astrology or Astronomy, Ancient Hindu, and the Nine Planets—
Letter on; by C. G. Stuart-Menteath ... 255

Astronomy and Astrology; A Question of Primogeniture—
By E. Walter Maunder 35

Astronomy without a Telescope—
By E. Walter Maunder—
I. Introductory 9
II. The Zodiacal Light 61
III. The Northern Stars 81
IV. A Total Solar Eclipse... 104
V. Observations of the Sun 132
VI. The Milky Way 158
VII. Meteors—The Perseids 174
VIII. Four Variable Stars... 199
IX. Auroræ 223
X. The Meteors of November 251

Australia, The Natives of, and their Origin—
By R. Lydekker 6

Bacon, Rev. John M., F.R.A.S.—
Mid-air Observations 1

PAGE

Bastides, The Land of the—
By Grenville A. J. Cole 187

Bavaria, Contrasts in—
By Grenville A. J. Cole 121

Bayley, R. Child—
Letter on Wireless-Telegraph Receiver ... 135

Birds, The Mud-nest Building, of Australia—
By D. Le Souëf 92

Black Rain, The, of August 6th, 1899—
By Major L. A. Eddie 19

Books, Reviews of—
Africa, Sport in East Central. By F. Vaughan Kirby 18
America, Impressions of. By T. C. Porter ... 40
Animal Biology. By C. Lloyd Morgan 58
Animals, Experiments on. By Stephen Paget ... 59
Animals in Motion. By Eadweard Muybridge ... 111
Arnold, Dr., Life and Correspondence of. By Dean Stanley 210
Art-Enamelling upon Metals, On the Theory and Practice of. By Henry Cunynghame 60
Astronomical and Physical Researches made at Mr. Wilson's Observatory, Daramona, Westmeath ... 278
Astronomische Instrumentenkunde, Handbuch der. By Dr. L. Ambronn... 17
Babylonians and Assyrians, Life and Customs of. By Rev. A. H. Sayce 60
Bacteria. By George Newman... 17
Berzelius and Schönbein, The Letters of. Edited by George W. A. Kahlbaum 257
Bird-land with Field-glass and Camera, In. By Oliver G. Pike 258
Bird-Life, The Story of. By W. P. Pycraft ... 258
Birds of Ireland, The. By Richard J. Ussher and Robert Warren 277
Botany, Object Lessons in. By E. Snelgrove ... 210
Brain, The Structure of the. By Albert Wilson ... 157
British People, The Origin and Character of. By Nottidge C. Macnamara 258
Chemistry, The Scientific Foundations of Analytical. By W. Ostwald 278
Colour: A Handbook on the Theory of Colour. By George H. Hurst 18
Constellations, An Easy Guide to the, with a Star Atlas. By Rev. James Gall 58
Constellations of the Greeks, Phœnicians, and Babylonians, Researches into the Origin of the Primitive. By Robert Brown, Junior 231
Crystallography, A Treatise on. By W. J. Lewis 157
Darwinism and Lamarckism. By F. W. Hutton ... 19
Dictionary of the English Language, The Standard Intermediate School... 136

683993

Books, Reviews of— PAGE

Dimorphism, Sexual, in the Animal Kingdom. By J. T. Cunningham 157
Dragon-Flies, British. By W. J. Lucas 112
Echinoderms, The Natural History of. By F. A. Bather 136
Eclipses, Recent and Coming. By Sir Norman Lockyer 112
Egyptian Magic. By E. A. Wallis Budge ... 59
Electricity and Magnetism, Elementary Lessons in. By S. P. Thompson 258
Electric Lighting. By A. C. Swinton 257
Empire, The Struggle for. By Robt. W. Cole ... 210
Ethics, A System of. By Friedrich Paulsen ... 39
Evolution by Atrophy. By Demoor, Massart, and Vandervelde 157
Evolution, Inorganic, as Studied by Spectrum Analysis. By Sir Norman Lockyer 231
Evolution, Organic, A First Book of. By D. K. Shute 135
Faraday and Schönbein, The Letters of. Edited by Georg W. A. Kahlbaum and Francis V. Darbishire 87
Fermentation and Micro-organisms. By Alfred Jorgensen 181
Ferric and Heliographic Processes. By George E. Brown 210
Flowerland, Sylvia in. By Linda Gardiner ... 59
Flowers, The Romance of Wild. By Edward Step 40
Free Will and Criminal Responsibility, The Universal Illusion of. By A. Hamon 40
Gases, The Rise and Development of the Liquefaction of. By Dr. Willett L. Hardin ... 59
Geography, The Teaching of, in Switzerland and North Italy. By Joan Berenice Reynolds ... 137
Hampshire Highlands, Wild Life in. By George A. D. Dewar 18
Health Reform, Common Sense. By T. Thatcher 19
Horns of Honour, and other Studies in the Byeways of Archæology. By Frederick Thomas Elworthy 156
Huxley, Life and Letters of Thomas Henry. By his Son, Leonard Huxley 279
Interpolation, The Theory and Practice of. By Herbert L. Rice 210
Italy, Modern, 1748—1898. By Pietro Orsi ... 156
Journal of Researches. By Charles Darwin ... 137
Knowledge, The Advance of. By Lieut.-Col. W. Sedgwick 59
Light and Sight, Curiosities of. By Shelford Bidwell 18
Living Pictures. By Henry V. Hopwood ... 40
Local Colour, A Romancer's. By S. R. Crockett ... 278
Malay Magic. By W. W. Skeat 112
Man and his Ancestors. By Charles Morris ... 182
Man, The Races of. By J. Deniker 86
Materials, The Strength of. By J. A. Ewing ... 157
Matter, Ether and Motion. By Prof. A. E. Dolbear 40
Mechanical and Physical Subjects, Papers on. By Osborne Reynolds 257
Mechanics, The Principles of. By Heinrich Hertz 182
Mechanism, The Wonders of Modern. By Charles H. Cochrane 59
Mental Culture, An Essay on. By G. A. Hight ... 210
Meteorology, Practical Exercises in Elementary. By Robert de Courcy Ward 135
Microscope, Chats about the. By Henry C. Shelley 19
Microscope, Common Objects of the. By Rev. J. G. Wood 59
Nation, The Mind of the. By Marcus R. P. Dorman 87
Naturalist, The Boyhood of a. By Fred Smith ... 135
Nature Knowledge, Chatty Object Lessons in. By F. W. Hackwood 210
Nature, Views on Some of the Phenomena of. By James Walker 18
Negritos, The Distribution of the, in the Philippine Islands and Elsewhere. By A. B. Meyer ... 181
Newton's Laws of Motion. By Prof. P. G. Tait ... 59
North Polar Expedition, The Norwegian. Scientific Results, Vol. I. Edited by Fridtjof Nansen ... 208
Oldest Books in the World. By Isaac Myer ... 279
Optics. A Manual for Students. By A. S. Percival 58
Optics, Handbook of, for Students of Ophthalmology. By W. N. Suter 58
Palæontology, Text-book of. By K. A. von Zittel 135
Photography in Colours, A Handbook of. By Thomas Bolas, Alex. A. K. Tallent and Edgar Senior 278
Physics, Experimental. By Eugene Lommel ... 88
Physiology, Practical. By M. Foster and J. N Langley 182
Plant, The Flowering. By J. R. Ainsworth Davis 210
Prehistoric Times. By Lord Avebury 181
Prose, The Makers of Modern. By W. G. Dawson 136
Railways of England, The. By W. M. Ackworth 112
Reliquary and Illustrated Archæologist, The. Volume V., 1899 40
Science and Faith. By Paul Topinard 58
Science, The Grammar of. By Karl Pearson ... 88
Scotland, The Social Life of, in the Eighteenth Century. By Rev. Henry Grey Graham ... 18
Selborne, The Natural History of. By Gilbert T. White. Edited by Grant Allen 17
Signalling through Space without Wires. By Prof. Lodge 210
Slime-Moulds, The North American. By Thomas H. Macbride 87
Smithsonian Institution: Annual Report of the Board of Regents of the 136
Star-land. By Sir Robert Stawell Ball 18
Stars, Star-Clusters, and Nebulæ, Photographs of. By Isaac Roberts 110
Stellar Spectra, An Atlas of Representative. By Sir William Huggins 256
Telephotography. An Elementary Treatise on the Construction and Application of the Telephotographic Lens. By Thomas R. Dallmeyer ... 60
Whales, A Book of. By F. E. Beddard 111
Wireless Telegraphy and Hertzian Waves. By S. R. Bottone 210
Zoology, A Manual of. By T. Jeffery Parker and William A. Haswell 59
Zoology, An Introduction to the Study of. By B. Lindsay 40
Zoology, A Text-book of. By Dr. O. Schmeil ... 257
Zoology, A Treatise on. Edited by E. Ray Lankester. Part II.—The Porifera and Cœlentera ... 277
Zoology, Introduction to. By C. B. and G. C. Davenport 257
Zoology, Practical. By the late T. J. Parker and W. N. Parker 136

Bottone, S.—

Letter on Wireless Telegraphy and Hertzian Waves 254

PAGE

Bristowe, Lindsay W., and H. P. Fitz-Gerald Marriott—
Stone Implements on the Gold Coast ... 241

Brook, Charles L.—
Letter on Lunar Rainbow 276

Brown, S. R. Stawell—
Letter on Rainbow Phenomena 276

Buss, Albert Alfred—
Letter on Artificial Faculæ, Spots and Photospheric Reticulation 252

Cattle, The Smallest of the Wild—
By R. Lydekker 217

Chatley, B.—
Letters on Astrology 205, 227

Chemical Evolution—A Chapter of History—
By G. Cecil Fry 139

Chess Column—
By C. D. Locock ... 23, 47, 71, 95, 119, 143, 167, 191, 215, 239, 263, 287

Clay-Stones—
Letter on; by S. H. Wright 255

Clouds, The Photography of—
By Eugene Antoniadi 79, 107

Cole, Grenville A. J., M.R.I.A., F.G.S.—
The Buried Alps 41
Across the Downs 89
Contrasts in Bavaria 121
The Land of the Bastides 187
The Borders of the Karst 218
The Heart of Dauphiné 271

Colour Effects, Production of 207

Comets and Meteors, Notes on—
By W. F. Denning ... 22, 46, 70, 94, 118, 142, 166, 190, 214, 238, 262, 285

Connell, R. J.—
Letter on Is the Stellar Universe Finite? ... 15

Cook, J. Alexandre—
Letter on Lichen growing on Quartz ... 183

Cooke, John H., F.L.S., F.G.S.—
Microscopy 21, 45, 69, 94, 117, 141, 165, 189, 214, 238, 262, 284

Corona, Solar, Dark Markings in the—
By W. H. Wesley 225
Letter on; by H. W. 275

PAGE

Coues, Dr. Elliott—
Obituary Notice of 39

Cygni, S. S. & S. U.—
Letter on; by David Flanery 39
Letter on; by David Flanery 134

Cygnus, The Milky Way in—
By Mrs. Walter Maunder 273

Dauphiné, The Heart of—
By Grenville A. J. Cole 271

Davison, Charles, Sc.D., F.G.S.—
Earthquake-Sounds 83
The Great Indian Earthquake of 1897 147, 169

Dawson, Sir J. William—
Obituary Notice of 16

Day Changes, Where the—
By Dr. A. M. W. Downing 100

Denning, W. F., F.R.A.S.—
Letter on Search for an Intra-Mercurial Planet 134
Jupiter and his Markings 200
Notes on Comets and Meteors 22, 46, 70, 94, 118, 142, 166, 190, 214, 238, 262, 285

de Tunzelmann, G. W., B.Sc.—
Wireless Telegraphy ... 25, 113, 184, 232, 281

Downing, Dr. A. M. W.—
Where the Day Changes 100

Downs, Across the—
By Grenville A. J. Cole 89

Dragon-Fly Nymphs, On the Respiration of Certain—
By Rev. Arthur East 220

Drops and their Splashes 115

Earp, W.—
Letter on A Large Meteor 155

Earthquake-Sounds—
By Charles Davison 83

Earthquake, The Great Indian, of 1897—
By Charles Davison 147, 169

Earwig, The, as a Benefactor—
Letter on; by Walter Wesché 64

East, Rev. Arthur—
Artificial "Réseau Photospherique" ... 129
On the Respiration of certain Dragon-fly Nymphs 220

PAGE

Eclipse, Crescent Images of the Sun during the—
Letter on; by E. Pierce 204

Eclipse of the Sun, The Coming—
By E. Walter Maunder 49

Eclipse, The Total Solar, of May 28th, 1900—
By E. Walter Maunder 145, 175

Eddie, Major L. A., F.R.A.S.—
The Black Rain of August 6, 1899 ... 19

Editorial 265

Electric Auto-Portraits—
By Alex. Thurburn 51

Elvins, A.—
Letter on Lunar Seas 38

Eros and the Astrographic Conference— ... 207

Explosions in Coal Mines—
By John Mills 4

Faculæ, Spots and Photospheric Reticulation, Artificial—
Letter on; by A. A. Buss 252

Fermentation, Some Early Theories on—
By W. Stanley Smith... ... ... 154, 179

Flanery, David—
Letter on S. S. Cygni 39
Letter on Observations of Variable Stars ... 65
Letter on S. U. Cygni... 134
Letter on Mira Ceti 206

Fowler, A., F.R.A.S.—
The Constituents of the Sun 11
The Face of the Sky 23, 47, 71, 95, 118, 143, 167, 191, 215, 239, 263, 286

Fry, G. Cecil—
Chemical Evolution 139

Garland, Chas. H.—
High-speed Telegraphy 193

Geographical Society, The Annual Awards of the Royal 181

PAGE

Godden, William—
Letter on The Phase of Venus seen with the Naked Eye 275

Gore, J. E., F.R.A.S.—
The Hundred Brightest Stars 202

Green, Jos. F., F.Z.S.—
Letter on Seal in Suffolk 67

Haddon, Prof. Alfred C., M.A., D.Sc., F.R.S.—
The Evolution of Simple Societies:
I. The Hunters 29
II. The Pastors of the Steppes 76
III. The Pastoral Societies 100
IV. The Beginning of Agriculture ... 171
V. The Metamorphosis of Herders into Tillers 221
VI. The Revolution effected by Corn ... 269

Hill, George H.—
Letter on Is the Stellar Universe Finite? ... 15

Holmes, Edwin—
Letter on The Collins' Monoplane Telescope 275

Indian Tribes, Some Wild—
By R. Lydekker 67

Indians, American—
By R. Lydekker 150

Inglis, Charles E., B.A.—
Letter on Is the Stellar Universe Finite? ... 65

Jupiter and His Markings—
By W. F. Denning 200
Letter on; by W. F. Denning 229

Karkinokosm, The, or World of Crustacea—
By Rev. T. R. R. Stebbing.
Little Wonders and Queer Blunders ... 73
Fish-Bears and their Kindred 162
The Many-Twinkling Feet 211
Crustacean Nurseries 266

Karst, The Borders of the—
By Grenville A. J. Cole 218

Kaulbars, Baron N. (Lt.-Gen.)—
Letter on The Nature of Sun-Spots 254
Letter on High-Speed Telegraphy 254

PAGE

Lawes, Sir John Bennet, Bart.—
Obituary Notice of 230

Le Souëf, D., C.M.Z.S.—
The Mud-Nest Building Birds of Australia 92

Leaves, A Cloud of Dried Beech—
Letter on; by T. H. Astbury 109

Leo, Alan—
Letters on Astrology 228, 255

Lichen growing on Quartz—
Letter on; by J. A. Cook 183

Lightning, Trees Struck by—
By Howard B. Little 13

Little, E. D.—
Polarity in Magic Squares 31, 53

Little, Howard B.—
Trees Struck by Lightning 13

Locock, C. D., B.A.—
Chess Column ... 23, 47, 71, 95, 119, 143, 167, 191, 215, 239, 263, 287

Lunar Phenomena, Some Curious—
Letter on; by Walter Williams 64

Lunar Rainbow—
Letter on; by J. Macintosh 255
Letter on; by Charles L. Brook 276

Lydekker, R., F.R.S.—
The Natives of Australia and their Origin ... 6
Some Wild Indian Tribes 67
Oceanic Negroes 97
The First Musk Oxen in England since the Glacial Epoch 137
American Indians 150
The Pygmies of Asia 196
The Smallest of the Wild Cattle 217
The Pygmies of the Great Forest 259

MacDowall, Alex. B., M.A.—
Long Waves of Winter Weather 44
Letter on London Summers 110
Letter on Hot and Dry Summers 204

Macgeorge, James—
Letter on "The 'Seas' of the Moon" ... 15

PAGE

Macintosh, John—
Letter on Lunar Rainbow 255

Markwick, Colonel E. E., F.R.A.S.—
Letter on The Constituents of the Sun 64, 86

Marriott, H. P. Fitz-Gerald, F.R.G.S., and L. W. Bristowe—
Stone Implements on the Gold Coast ... 241

Maunder, E. Walter, F.R.A.S.—
Astronomy and Astrology; A Question of Primogeniture 35
The Coming Eclipse of the Sun 49
The Total Solar Eclipse of May 28, 1900 145, 175
Astronomy Without a Telescope.
I. Introductory 9
II. The Zodiacal Light 61
III. The Northern Stars 81
IV. A Total Solar Eclipse 104
V. Observations of the Sun 132
VI. The Milky Way 158
VII. Meteors—The Perseids 174
VIII. Four Variable Stars 199
IX. Auroræ 223
X. The Meteors of November 251

Maunder, Mrs. Walter—
The Milky Way in Cygnus 273

Meteor, A Large—
Letter on; by W. Earp 155

Meteoric Dust, Collecting—
Note on 16

Microscopy—
By John H. Cooke ... 21, 45, 69, 94, 117, 141, 165, 189, 214, 238, 262, 284

Mid-Air Observations—
By John M. Bacon 1

Mills, John, F.R.A.S.—
Explosions in Coal Mines 4

Mira Ceti—
Letter on; by David Flanery 206

Mitchell, Arthur Ed.—
Letter on Is the Stellar Universe Finite? ... 155

Mivart, Prof. St. George, F.R.S., etc.—
Obituary Notice of 110

XUM

PAGE

Monck, W. H. S.—

Letters on "Is the Universe Finite?" 38, 85, 108

Moon, The "Seas" of the—

Letter on; by James Macgeorge 15
Letter on; by A. Elvins 38

Musk-Oxen in England, The First, since the Glacial Epoch—

By R. Lydekker 137

Musson, W. B.—

Letter on A New Form of Achromatic Telescope 252

Nebula, Trifid, H IV. 41 Sagittarii, and of the Region Surrounding, Photograph of—

By Isaac Roberts 35

Nebulæ M. 8 Sagittarii and H VI. Ceti, Photographs of—

By Isaac Roberts 132

Negroes, Oceanic—

By R. Lydekker 97

Ornithological Notes, British—

Bee-Eater in Shetland—Arthur Adie 41
Bittern in Devonshire—W. S. M. D'Urban ... 88
Bustard, Re-introduction of the Great 230
Buzzard, Rough-legged, near Londonderry—D. C. Campbell 61
Chiff-chaff in Barra—W. L. Macgillivray ... 156
Cuckoo, The: a Study—Rev. E. A. Woodruffe-Peacock 156
Cuckoo, Yellow-billed, in Wales—George Dickinson 61
Devonshire, Winter Visitors to—W. S. M. D'Urban 89
Ducks assuming Drake's Plumage—Jos. F. Green ... 156
Egg enclosed in another—F. W. Headley ... 89
Fowl and Rabbit—Jos. F. Green 156
Garganey, Breeding of the, in Kent—N. F. Ticehurst 156
Goose, Snow, in Ireland 41
Grebes, Great Crested, in Richmond Park—W. R. Read 231
Greylags, The, of Blair Drummond—Lieut.-Colonel Duthie 256
Harrier, Montagu's, in Wicklow—Edward Williams 41
Hawfinch, The, as a Durham Bird—J. W. Fawcett... 156
Kite in Kent—Jos. F. Green 61
Lincolnshire, North-East, Bird Notes from, during the Autumn Migration of 1899—G. H. Caton Haigh 156
Migrants, Summer—E. Sillence... 156
Nesting-boxes for Wild Birds—E. G. B. Meade-Waldo 276
Nightjars, An Observational Diary of the Habits of—Edmund Selous 21
Norfolk, Ornithological Notes from, during 1899—J. H. Gurney 156
Nutcracker in Lincolnshire—H. F. W. 256

PAGE

Orioles, Golden, in Devon—Arnold D. Taylor ... 206
Owl, Long-eared, in Barra—W. L. Macgillivray ... 156
Owl, Scops, in Shetland—W. Eagle Clarke ... 181
Pastor, Rose-coloured, in Co. Mayo—Robert Warren 41
Pheasants, Late Brood of Wild—W. B. Tegetmeier 277
Pipit, Water, in Sussex—N. F. Ticehurst 156
Plover, An Observational Diary of the Habits of the Great—Edmund Selous 277
Pochard, The Red-crested in Yorkshire—T. H. Nelson 256
Pratincole near Montrose—J. A. Harvie-Brown ... 41
Protection, Bird 180
Robin, The, and the Nightingale—Charles A. Witchell 21
Robins, Wild, as Pets—Frances T. Battersby ... 89
Ruff, The Natural History of the—Charles J. Patten 206
Scotland, Report on the Movements and Occurrence of Birds in, during 1899—T. G. Laidlaw ... 156
Sea-fowl of the Dublin Coast, Recent Observations on the—Charles J. Patten 21
Shearwater, The Great, in Scottish Waters—Alfred Newton 181
Shearwater, The Levantine, at Scarborough—R. Fortune 277
Shoveler, Breeding of the, in Kent—N. F. Ticehurst 156
Swans, Bewick, in Suffolk—Jos. F. Green .. 61
Tern, Sandwich, A Visit to Lough Erne in search of the—Robert Warren 231
Thrush's Nest made of Moss—Jos. F. Green ... 60
Titmouse, Bearded, A Short History of—J. H. Gurney 231
Warbler, Grasshopper, in Morayshire—J. A. Harvie-Brown 41
Warbler, The Melodious, in Sussex—W. Ruskin Butterfield 206
Yorkshire, Natural History Notes from, for 1899—Oxley Grabham 156

Parr, W. Alfred—

A Temple of Science 103
Letter on Mental Perspective 182

Pearson, H. H. W., B.A.(Cantab.)—

Plants and their Food 2, 55, 101, 159, 235, 244

Pepper, Prof. John Henry—

Obituary Notice of 110

Perspective, Mental—

Letter on; by W. Alfred Parr 182

Phelps, Geo.—

Letter on Is the Stellar Universe Finite? ... 109

Pickering, Edward C.—

Mme. Ceraski's Second Algol Variable ... 81
A Photographic Search for an Intermercurial Planet 106

Pierce, E.—

Letter on Crescent Images of the Sun during the Eclipse 204

PAGE

Pisciculture, Modern—
By T. A. Gerald Strickland... 123

Planet, Intermercurial, A Photographic Search for an—
By Edward C. Pickering 106

Planet, Intra-Mercurial, Search for an—
Letter on; by W. F. Denning 134

Planet, The Hypothetical—
Letter on; by G. McKenzie Knight ... 206

Plants and their Food—
By H. H. W. Pearson 2, 55, 101, 159, 235, 244

Polarity in Magic Squares—
By E. D. Little 31, 53

Pygmies of Asia, The—
By R. Lydekker 196

Pygmies of the Great Forest, The—
By R. Lydekker 259

Rainbow Phenomena—
Letter on; by S. R. Stawell Brown ... 276

"Reseau Photospherique," Artificial—
By Rev. Arthur East... 129

Roberts, Isaac, D.Sc., F.R.S.—
Photograph of the Trifid Nebula H IV. 41 Sagittarii, and of the Region Surrounding 35
Photographs of the Nebulæ M. 8 Sagittarii and H VI. Ceti 132

Robinson, Norman—
Letter on Wireless-Telegraph Receiver ... 109

Royal Society's Medals, The—
Note on 276

Ruskin, John—
Obituary Notice of 39

Saturn, Occultation of, on September 3rd—
Letter on; by W. F. Denning 229

Science, A Temple of—
By W. Alfred Parr 103

PAGE

Seal in Suffolk—
Letter on; by Jos. F. Green 67

Sky, The Face of the—
By A. Fowler ... 23, 47, 71, 95, 118, 143, 167, 191, 215, 239, 263, 286

Smith, W. A.—
Letter on Acids in Soil 16

Smith, W. Stanley, Ph.D.—
Some Early Theories on Fermentation 154, 179

Smyth, Charles Piazzi—
Obituary Notice of 89

Societies, The Evolution of Simple—
By Prof. Alfred C. Haddon—
I. The Hunters 29
II. The Pastors of the Steppes 76
III. The Pastoral Societies 126
IV. The Beginning of Agriculture ... 171
V. The Metamorphosis of Herders into Tillers 221
VI. The Revolution effected by Corn ... 269

(Star), Mme. Ceraski's Second Algol Variable—
By Edward C. Pickering 81

Stars, Observations of Variable—
Letter on; by David Flanery 65

Stars, The Hundred Brightest—
By J. E. Gore 202
Letter on; by L. Cuthbertson 229

Stebbing, Rev. Thomas R. R., M.A., F.R.S., F.L.S.—
The Karkinokosm, or World of Crustacea—
Little Wonders and Queer Blunders ... 73
Fish-Bears and their Kindred 162
The Many-Twinkling Feet 211
Crustacean Nurseries 266

Stellar Universe, Is the, Finite?—
Letters on; by Wm. Anderson ... 14, 86
Letter on; by R. J. Connell... 15
Letter on; by George H. Hill 15
Letters on; by W. H. S. Monck ... 38, 85, 108
Letter on; by Charles E. Inglis 65
Letter on; by Geo. Phelps 108
Letter on; by Arthur Ed. Mitchell ... 155

XUM

PAGE

Stone Implements on the Gold Coast—
By L. W. Bristowe and H. P. FitzGerald Marriott 241

Strickland, T. A. Gerald—
Modern Pisciculture 123

Stuart-Menteath, Charles G.—
Letter on Ancient Hindu Astrology or Astronomy and the Nine Planets 255

Summers, Hot and Dry—
Letter on; by Alex. B. MacDowall... ... 204

Summers, London—
Letter on; by Alex. B. MacDowall... ... 110

Sun, The Constituents of the—
By A. Fowler 11
Letters on; by E. E. Markwick ... 64, 86

Sun-Spots, The Nature of—
Letter on; by Baron N. Kaulbars 254

"Syritta pipiens," The Fly—
By Walter Wesché 33

Tate, Sir Henry—
Obituary Notice of 16

Telegraphy, High-Speed—
By Charles H. Garland 193
Letter on; by Baron N. Kaulbars 254

Telescope, A New Form of Achromatic—
Letter on; by W. B. Musson... 252

Telescope, The Collins' Monoplane—
Letter on; by Edwin Holmes 275

PAGE

Telescope, The Great, of Paris, 1900—
By Eugene Antoniadi... 246

Thurburn, Alex.—
Electric Auto-Portraits 51

Venus, The Phase of, seen with the Naked Eye—
Letter on; by William Godden 275

Weather, Long Waves of Winter—
By Alex. B. MacDowall 44

Wesché, Walter—
The Fly "Syritta pipiens" 33
Letter on The Earwig as a Benefactor ... 64

Wesley, W. H.—
Dark Markings in the Solar Corona 225

Williams, Walter, M.B.—
Letter on Some Curious Lunar Phenomena 64

Wireless-Telegraph Receiver—
Letter on; by Norman Robinson 109
Letter on; by R. Child Bayley 135

Wireless Telegraphy—
By G. W. de Tunzelmann 25, 113, 184, 232, 281

Wireless Telegraphy and Hertzian Waves—
Letter on; by S. Bottone 254

Wright, S. H.—
Letter on Clay-Stones 255

Zodiacal Light, The, in Relation to the Corona—
Letter on; by "A Country Lad" 228

INDEX OF THE PRINCIPAL ILLUSTRATIONS.

PAGE

Akka Woman, An 260

Alps, The Buried—
Ploughing in the Plain of Western Hungary 42
In the Oak-Forest of Vukovina ... 43

Andamanese, Group of 197

Anoa, Male and Female, at Woburn Abbey 218

Australia, Natives of Western—
Full-face Portrait of a Woman, and Profile View of a Man (full-page Plate) 8

Australian Aborigines, Group of West 8

Birds, The Mud-nest Building, of Australia—
Nest of *Corcorax melanorhamphus* 92
Nests of *Struthidea cinerea* and *Grallina picata* 93

Black Rain, Elliptical Sporules in 20

Chimpanzee, Palate of Skull of ... 7

Clouds, Photographs of, by Mons. Eugene Antoniadi—
Fibred Cirrus, Cirrus with Wisps, and Cloud Ripples 80
Cirro-Cumuli passing before the Sun, and Thunder-Storm Cumuli (full-page Photographic Plate)... 80
Cumuli forecasting Fine Weather 107
Primary and Secondary Rainbows 107
Sunset Effect 108
Cirro-Cumulus and Rain-Cloud (Full-page Photographic Plate) 108

Corona, Solar, Dark Markings in the—
Diagram of Markings on the Corona of 1871 225
Diagrams of Markings on the Coronas of 1896 and 1898 ... 226
The Corona of 1900 (full-page Plate, from a drawing by Mr. W. H. Wesley) 227

Cygnus, The Milky Way in (full-page Photographic Plate by Mrs. Walter Maunder) 274

Drops and their Splashes—
Instantaneous Shadow Photographs of the Splash of a Drop of Mercury 116
Various Stages of the Splash, produced by a ball falling into a basin of milk and water ... 117

PAGE

Earthquake, The Indian, of 1897—
Map of the Disturbed Area ... 148

Eclipse, Photograph of Crescent-shaped Images of the Sun during 205

Eclipse, The Total Solar, of May 28, 1900—
Maps showing the Path of the Moon's Shadow during the Eclipse (full-page Plate) ... 50
The Corona of 1900, May 28 (full-page Plate, from a drawing by Miss Catherine D. Stevens) ... 146
The Corona of 1900, May 28 (S.W. Quadrant) (full-page Plate, from a drawing by Miss Lilian Martin-Leake) 178
Mr. Evershed's Observing Hut at Mazafram, showing the Cœlostat 146
Rev. C. D. P. Davies and Telephotographic Camera at Algiers 146
Miss Leake at her Telescope, Algiers 147
Mrs. Walter Maunder and her two Cameras, Algiers 147
The Meteorological Instruments and Shadow-Band Sheet, Algiers 176
The Harbour, Algiers, five minutes before Totality 177

Electric Auto-Portraits—
Normal Positive and Normal Negative on Glass 51
Normal Negative on Paper; Negative on Nikko Paper ... 52
Glass Negative with two Leyden Jars, showing oscillations ... 53

Fishery, Solway, Hatchery at the... 124

Galileo, The Tribuna di, in the Museum of Physical Science at Florence 104

Heavens at .30 p.m. on March 6, 1900, from the Latitude of London 63

Indian Tribes, Some Wild—
Toda Man; Toda Beauty; Vedda Man and Woman (full-page Photographic Plate) 67

Indians, American—
A Typical North American Indian 151
Male and Female Indians of the Turi-nara Tribe, from the Rio Ncara, Para, Brazil ... 152, 153

PAGE

Jupiter and His Markings (full-page Plate) 200

Karkinokosm, The, or World of Crustacea—
Nannastacus suhmi, Sars. Philippine Islands 73
Pseudocuma campylaspoides, Sars. Caspian Sea 74
Cumella limicola, Sars. Eyes and front of Carapace 74
Cyclaspoides ferox (Fischer). Bay of Biscay and Mediterranean ... 75
Diastylis sculpta, Sars. Maxillæ and Maxillipeds 75
Leptochelia forresti, Stebbing ... 162
Cirolana borealis, Lilljeborg ... 163
Serolis bromleyana, v. Willemoes Suhm 163
Anthelura elongata, Norman ... 164
Astacilla damnoniensis, Stebbing 164
Eurycope novæ-zelandiæ, Beddard 165
Scina rattrayi, Stebbing. Hyperid from Atlantic 211
Pardalisca abyssi, Boeck. Gammarid, with eyes imperfectly developed 211
Parvipalpus linea, Mayer; *Tetrathyrus moncœuri*, Stebbing; *Dithyrus faba*, Dana; and *Calamorhynchus rigidus*, Stebbing ... 212
Talorchestia telluris, Bate ... 213
Gnathia maxillaris (Montagu). Male, Female and Larva ... 266
Zoea longispina, Dana. Porcellanid larva 267
Estheria packardi, Brady. Nauplius and Female 268
Branchipodopsis hodgsoni, Sars. Female and Nauplius 268
Phyllosoma laticorne, Leach. Giant Scyllarid larva from New Guinea 268

Musk Ox, Young Bull 138

Nebula ♅ VI. Ceti. Nebula M. 8 Sagittarii (full-page Photographic Plate by Dr. Isaac Roberts) ... 132

Nebula ♅ IV. 41 Sagittarii (full-page Photographic Plate by Dr. Isaac Roberts) 35

Plants and their Food—
Surface View of a portion of an Iris Leaf showing Stomata ... 57
Transverse Section through a Leaf of the Cherry Laurel 57
A Vertical Section through Soil, showing the external cells of a root giving off root-hairs ... 160
Lupine Plant, from a drawing by Miss E. E. Pratt... 237

XUM

PAGE

"Reseau Photospherique," Artificial—

Photographs of the Sun's Surface, showing Granule Pattern 130, 131

Photographs of Artificial Solar Granule Pattern... ... 130, 131

Säntis, Switzerland, Summit of the 91

Stars, The Chief Circumpolar, midnight, April 1, 1900 82

Stone Implements from West Africa 243

Sun, The Constituents of the—

Spectra 11, 12

"Syritta pipiens," The Fly—

Female, Male, and Mouth organs 33

Hind leg, end of tibia, antenna, and hypopygium... 34

Clasper and holding organ of Male 35

PAGE

Telegraphy, High-Speed—

Diagrams of the sending and receiving apparatus of the Pollak-Virág Telegraph... 195

Photographic reproduction of an actual message 196

Telescope, The Great, of Paris, 1900—

The Great Siderostat (full-page Photographic Plate) 248

Principle of the Siderostat ... 246

The Great Siderostat of Paris, 1900 (drawing) 247

Right Ascension and Declination Axes and Circles of Siderostat... 248

The Great Mirror and the Object Glass 248

General view from the eye-end of the Great Telescope 249

The Planet Venus, and various Nebulæ viewed with the Great Telescope 250, 251

PAGE

Wireless Telegraphy—

Morse's, Preece's, and Willoughby Smith's methods of transmission 27, 28

Diagram of Lodge's Hydraulic Model of Leyden Jar 185

Lodge's Hydraulic Model of Leyden Jar 186

Lodge's Experiments with Syntonic Leyden Jars 232

Hertz's Oscillator and Resonator... 233

Oscillations (various) 233

Popoff's Hertzian Wave Receiver 281

Long Distance Marconi Transmitter 281

Righi Oscillator for use with Reflector 282

Marconi Transmitter with Parabolic Reflector 282

Marconi Coherer 282

Marconi Receiver with Vertical Wire and Earth Connection ... 282

Marconi Receiver with Parabolic Reflector 283

Marconi Mast at the South Foreland 284